**Remarks/Arguments:**

The specification is amended hereby to insert, at page 4 (brief description of the drawings) and page 14, sequence identifiers (from the Sequence Listing) adjacent names of the sequences shown in application Figure 4. Accordingly, the drawings objection is overcome and no new (replacement) drawings are necessary. MPEP 2422.02.

Claims 41-80, presented hereby, are pending.

Claims 1-40 are canceled, without prejudice or disclaimer.

Independent claim 41 contains subject matter of claim 1 and as described in the specification (page 2) (i.e., forming a hybrid between detection probes and the analyte, before the detecting step), rewritten to more clearly define the invention. Independent claim 42 combines subject matter of claims 3 and 24, rewritten to more clearly define the invention. Dependent claims 43-80 contain subject matter of claims 2, 4-23, and 25-40, rewritten to more clearly define the invention.

Claims were rejected under 35 USC 112, ¶2, for allegedly being indefinite. Reconsideration is requested.

The rejected claims are amended hereby—as new claims—in a good faith effort to resolve all issues raised in the rejection.

In view of the foregoing remarks, the rejection of claims under §112, ¶2, is overcome. Withdrawal of the rejection appears to be in order.

Claims 1, 3-6, 12-14, 16-18, 21, 29-37, and 40 were rejected under 35 U.S.C. 102(e) as allegedly anticipated by Kelso. Reconsideration of the aforesaid rejection is requested, in view of the changes to the claims, effected hereby, in conjunction with the following remarks.

The subject matter of the present claims reflect changes to the rejected claims, such none of the present claims is anticipated by Kelso.

Present claim 41 and claims dependent thereon are limited to "quenching probes," which are neither taught nor suggested by Kelso. The "absence" from Kelso of the *quenching probes* limitation "negates anticipation" by the cited reference. *Kolster Speedsteel A B v. Crucible Inc.*, 230 USPQ 81, 84 (Fed. Cir. 1986).

Present claim 42 and claims dependent thereon are limited to a method performed in "homogenous format" (i.e., a homogeneous assay) (see specification page 1). The "absence" from Kelso of the *homogenous format* limitation "negates anticipation" by the cited reference. *Kolster Speedsteel A B*, 230 USPQ at 84.

Moreover, the presently claimed "homogenous format" method is advantageous since no washing steps and no amplification of the signal is necessary. On the other hand, Kelso requires washing steps (VI. Detection Assays[108], teaching certain embodiments.....and various operations are carried out, such as the addition of miscellaneous reagents, incubations, washings and the like and, also, the film and the immobilized particles are washed, and bound targets are detected). Even Example 1 of Kelso discloses necessary washing steps ([0012]ff.).

Such washing and separation steps would undermine the purpose of the presently claimed "homogenous format" method, which is to provide a high throughput assay capable of efficiently screening a large number of compounds (e. g., exposure times were usually in the range of 500-1000 ms, 1-5 image pairs /well of a standard titerplate housing, as disclosed in the specification).

Furthermore Kelso does not disclose solid supports in solution. Kelso et al. only discloses solid supports (particles /beads) which are immobilized (e.g. Abstract: .." film-immobilized capture particles"). Particles according to the present claims (solid supports as beads, cells, pollen and a plurality thereof) are not bound to any surface (e.g., Example 1a of the subject application).

Kelso does create a mask to measure fluorescence intensities, but the Kelso mask is created in a different way than in the present claims. Kelso creates a mask from a special image where all the objects are of similar intensity ([0201] the mask was generated from an image where all the objects are of similar intensity since the apparent size of the object is proportional to its fluorescence intensity). This mask is applied to any fluorescent image [0205].

According to the present claims beads/cells are not immobilized (as disclosed in the specification, it is preferred that the image recorded at the emission wavelength of the second reporter is recorded simultaneously with the image used for detecting the detection probe/detection oligonucleotides utilizing two detectors; the reference image is also necessary for the localization of the beads, a mask of (these) rings corresponding to detected beads was generated from the reference image and this mask was applied to the signal image ..Areas within

the outer boundary of the ring were evaluated for fluorescence intensity stemming from the DO-analyte-CO complex bound to the bead; in addition, correction images with appropriate dye solutions, pre-stained beads and dark images were recorded).

In view of the foregoing remarks, the rejection of claims under §102(e), as allegedly anticipated by Kelso, is overcome. Withdrawal of the rejection appears to be in order.

Claim 15 was rejected under 35 U.S.C. §103(a) based on the combined teachings of Kelso and Oberhardt. Claims 22 and 23 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable based on the combined teachings of Kelso and Spack. Claims 24 and 25 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable based on the combined teachings of Kelso and Cabib. Claim 38 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Kelso in view of Kachab. Claim 39 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Kelso in view of Kolb. Claims 2, 19 and 20 were rejected under 35 U.S.C. §103(a) as being allegedly unpatenable over Kelso in view of Adams. Reconsideration of the aforesaid rejections under §103(a) is requested, in view of the changes to the claims, effected hereby, in conjunction with the following remarks.

None of the cited secondary references cures the fatal deficiencies in the primary reference (Kelso), as explained above in connection with the rejection under §102(e); i.e., none of the cited secondary references—taken together with Kelso—teaches or suggests the present claims limited to "quenching probes" or the present claims limited to a "homogeneous [assay] format." Since "the cited references do not support each limitation of [the present] claim[s],"

each of the rejections under §103(a) is "inadequate on its face." *In re Thrift*, 63 USPQ2d 2002, 2008 (Fed. Cir. 2002). Accordingly, withdrawal of all the rejections under §103(a) that rely on Kelso, i.a., appears to be in order.

Claims 1, 2, 7-9 and 26-28 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Adams in view of Li and Yamamoto. Reconsideration of the rejection is requested, in view of the changes to the claims, effected hereby, in conjunction with the following remarks.

Applicants acknowledge that Adams (page 9, last paragraph to page 10) describes a nucleic acid hybridization assay, which uses a solid support, i.e., a "dipstick" ("The dipstick permits easy transfer from the various solutions used in hybridization"). The disclosed method is not performed in a "homogeneous format," as in the present claims.

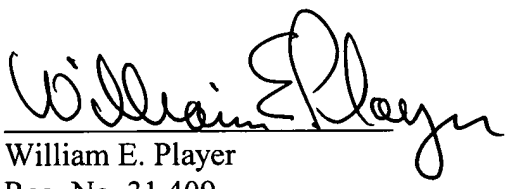
Li discloses homogeneous nucleic acid probes based on displacement hybridization, the nucleic acid strands are not bound to any solid surface. Li. (page 1, right column) states that current probes, either linear or conformationally constrained, when recognizing their target undergo a direct hybridization reaction that involves hybridization between two single stranded nucleic acids and that with direct hybridization it is difficult to achieve mismatch discrimination. To overcome these shortcomings Li developed stable duplex probes that "consist of two complementary oligodeoxyribo-nucleotides of different length labeled with a fluorophor and a quencher in close proximity in the duplex (new): The probes on their own are quenched, but they become fluorescent upon displacement hybridization with the target." This statement teaches

away from the present claims using—in the first step—single stranded probes (oligonucleotides) bound to the target, i.e., "contacting the sample with the detection probes, the solid support and the capture probes"; and, "detecting" being conducted after "forming a hybrid between detection probes and the analyte"; and "detecting the detection probes, wherein the detection of detection probes is conducted in the presence of quenching probes."

As such the combined teachings of Adams, Li, and Yamamoto would not have led the skilled artisan to the presently claimed method. Withdrawal of the rejection under §103(a) based on Adams in view of Li and Yamamoto appears to be in order.

Favorable action is requested.

Respectfully submitted,



William E. Player
Reg. No. 31,409
Attorney of record

JACOBSON HOLMAN PLLC
400 Seventh Street, NW
The Jenifer Building
Washington, D.C. 20004
Tel. (202) 638-6666
Fax (202) 393-5350
Date: April 1, 2009
WEP/
R:\Nicole\WEP\P68581US1 amd.doc